

We Claim:

~~Patent claims~~

1. A display instrument having at least two illuminated
5 pointers which are located one on top of the other, are
each composed of a head and a pointer lug and can be
rotated independently of one another about a common
display axis, the illuminated pointers being composed
10 of a light-guiding material and each having a light
entry face and the light injected there exiting on the
side of the pointer lugs facing the viewer,
characterized in that for at least two of the
illuminated pointers (4, 6) there is a common light
15 source, and in that the light is fed to the illuminated
pointers (4, 6) via a light splitter (10).

2. The display instrument as claimed in claim 1,
characterized in that the drive shaft (7) of a pointer
serves as a light guide and a portion of the drive
20 shaft (7) is embodied as a light splitter (10).

3. The display instrument as claimed in claim 2,
characterized in that the light splitter (10) is
plugged together with the main part (8) of the drive
25 shaft (7).

4. The display instrument as claimed in claim 2 or 3,
characterized in that, in the light splitter (10), one
portion of the light exits in the direction of the axis
30 of rotation and a further portion exits perpendicular
thereto.

5. The display instrument as claimed in claim 4,
characterized in that the upper illuminated pointer (4)
35 has a light entry face (30) which picks up the light
exiting in the axial direction, this illuminated
pointer (4) being plugged onto the light splitter (10).

6. The display instrument as claimed in claim 5, characterized in that the lower illuminated pointer (6) has a light entry face which picks up the laterally exiting light.

5

7. The display instrument as claimed in claim 6, characterized in that the head (12) of the lower illuminated pointer (6) surrounds the light splitter (10) in an annular shape and the light entry face is embodied on an inner generated surface (32) in the head (12).

8. The display instrument as claimed in one of the preceding claims, characterized in that the light splitter (10) has a frustum-shaped coaxial depression (21), the generated surface (24) of the frustum (23) serving as a reflection face for the laterally exiting light and the base face (25) serving as an exit face for the axially exiting light.

FBI LABORATORY

Splitting of light in order to illuminate two coaxial pointers from one light guide

- 1 Display instrument
- 2 Dial
- 3 First drive unit
- 4 Illuminated pointer
- 5 Second drive unit
- 6 Illuminated pointer
- 7 Drive shaft
- 8 Main part
- 9 Actuating motor
- 10 Light splitter
- 11 Head
- 12 Head
- 13 Drive shaft
- 14 Gearwheel mechanism
- 20 Drilled hole
- 21 Depression
- 22 Cylindrical section
- 23 Frustum
- 24 Generated surface
- 25 Base face
- 30 Light entry face
- 32 Generated surface
- 33 Cap
- 34 Cover
- 35 Reflection face
- 40 Light-emitting diode

SEARCH WORDS:

LIGHT SPLITTER

COAXIAL POINTERS

FRUSTUM

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